A36121-PCT-USA-A 072035.0134 PATENT

IN THE CLAIMS:

1-9 (Cancelled)

10. (New) A filter element for removing contaminants from gases comprising a monolithic

porous carbon structure wherein the filter element is a single piece and is not granular and is not

composed of granular carbons bound together by a binder and the walls of the carbon monolithic

structure have continuous voids or pores through which liquid or vapours can pass.

11. (New) A filter element according to claim 1, wherein the monolithic porous carbon structure

has a cell structure wherein the channel size is between about 100microns and 2000microns and

the wall thickness is between about 100microns and 2000microns with an open area of between

about 30 and 60%.

12. (New) A filter element according to claim 1, wherein the monolithic porous carbon structure

has a surface area of at least $700\text{m}^2/\text{g}$.

13. (New) A filter element according to claim 2, wherein the monolithic porous carbon structure

has a surface area of at least 700m²/g.

14. (New) A filter element as claimed claim 1, wherein the carbon monolithic structure has a

surface area in excess of 1000m²/g.

15. (New) A filter element as claimed claim 2, wherein the carbon monolithic structure has a

surface area in excess of $1000m^2/g$.

16. (New) A filter element according to claim 1, wherein the carbon monolithic structure has a

length of about 1 to 10 cm.

17. (New) A filter element according to claim 1, wherein the carbon monolithic structure is

produced by partially curing a phenolic resin to a solid, comminuting the partially cured resin,

extruding the comminuted resin, sintering the extruded resin so as to produce a form-stable

-3-

A36121-PCT-USA-A 072035.0134 PATENT

sintered product and carbonising the form-stable sintered product.

18. (New) A filter element according to claim 2, wherein the carbon monolithic structure is

produced by partially curing a phenolic resin to a solid, comminuting the partially cured resin,

extruding the comminuted resin, sintering the extruded resin so as to produce a form-stable

sintered product and carbonising the form-stable sintered product.

19. (New) A filter structure according to claim 1, comprising a plurality of filter elements

wherein each of the filter elements is from about 1 to 3 cm in length separated from an adjacent

filter element by a gap of about 0.5 to 1.5 cm.

20. (New) An apparatus for the removal of contaminants from gases such as air, comprising a

container containing (i) a filter element; (ii) a gas inlet for the container and (iii) a gas outlet for

the container whereby gases can pass via the inlet through the filter element and out through the

outlet and in which the filter element comprises a monolithic porous carbon structure which is a

single piece and is not granular and is not composed of granular carbons bound together by a

binder and the walls of the carbon monolithic structure have continuous voids or pores through

which liquid or vapours can pass.

21. (New) Apparatus according to claim 11, wherein the monolithic porous carbon structure has

a cell structure wherein the channel size is between about 100microns and 2000microns and the

wall thickness is between about 100microns and 2000microns with an open area of between

about 30 and 60%.

22. (New) Apparatus according to claim 12, wherein the monolithic porous carbon structure has

a surface area of at least 700m²/g.

23. (New) Apparatus as claimed claim 11, wherein the carbon monolithic structure has a surface

area in excess of 1000m²/g.

-4-

A36121-PCT-USA-A 072035.0134 PATENT

24. (New) Apparatus as claimed claim 12, wherein the carbon monolithic structure has a surface

area in excess of 1000m²/g.

25. (New) Apparatus as claimed claim 11, wherein there is a plurality of filter elements and

wherein each of the filter elements is from about 1 to 3 cm in length and is separated from an

adjacent filter element by a gap of about 0.5 to 1.5 cm.

26. (New) Apparatus as claimed claim 12, wherein there is a plurality of filter elements and

wherein each of the filter elements is from about 1 to 3 cm in length and is separated from an

adjacent filter element by a gap of about 0.5 to 1.5 cm.

27. (New) Apparatus according to claim 11, wherein the carbon monolithic structure is produced

by partially curing a phenolic resin to a solid, comminuting the partially cured resin, extruding

the comminuted resin, sintering the extruded resin so as to produce a form-stable sintered

product and carbonising the form-stable sintered product.

28. (New) Apparatus according to claim 12, wherein the carbon monolithic structure is produced

by partially curing a phenolic resin to a solid, comminuting the partially cured resin, extruding

the comminuted resin, sintering the extruded resin so as to produce a form-stable sintered

product and carbonising the form-stable sintered product.

29. (New) Apparatus according to claim 11, further comprising a respirator.

-5-